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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/302,825	04/30/1999	RICHARD J. PEARSON	101069-0170	7476

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EXAMINER
DAVIS, TEMICA M

ART UNIT	PAPER NUMBER
2685	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

PP4

Office Action Summary

	Application No. 09/302,825	Applicant(s) Pearson
	Examiner Temica M. Davis	Art Unit 2685

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___3___ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _Apr 30, 1999_

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-33_ is/are pending in the applica

    4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-33_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b) ☐ Some* c) ☐None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

    a)☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). __2__

4) ☐ Interview Summary (PTO-413) Paper No(s). _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other:

U. S. Patent and Trademark Office

PTO-326 (Rev. 04-01)   Office Action Summary   Part of Paper No. 4

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.   Claim 9 recites the limitation "the control program" in line 1. There is insufficient

antecedent basis for this limitation in the claim.

However, for examining purposes, "the control program" will be interpreted as "the

original control program".

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-10, 12, 20-23 and 29-33 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Doiron et al (Doiron), WO 98/23050 and Shah, U.S. Patent No. 6,029,065.

Doiron and Shah are analogous art because they are from the same field of endeavor, that is radio communications, specifically pertaining to over the air programming of mobile devices via a base station.

Regarding claim 1, Doiron discloses a method for programming wireless subscriber terminals in a wireless system, the wireless system having a base station (20, 22) in wireless communication with the wireless subscriber terminals using one channels, and each wireless subscriber terminal having a memory, a non-volatile memory, a processor, and an original control program running on the processor to control operation of the wireless subscriber terminal (abstract; figure 1), the method comprising the steps of: initializing one or more participating wireless subscriber terminals from the base station, inherently using a channel as evidenced by the fact that a base station is transmitting information to a mobile), to receive a complete program over a selected channel (page 11, lines 3-10; figure 1); transmitting a complete program from the base station using the selected channel, the complete program comprising a plurality of program segments communicated to the wireless subscriber terminals in separate messages (page 11, lines 11-21; figures 1 and 4-9); verifying that each participating wireless subscriber terminal has received the complete program (page 14, lines 11-20); storing the complete program in the non-volatile memory of each participating wireless subscriber terminal as a new control program (abstract, page 9, lines 5-15) and page 15, lines 3-10); and transferring control of each participating wireless subscriber terminal to the new control program (page 15, lines 7-10).

Doiron, however, fails to specifically disclose wherein the base station is using control or

traffic channels in order to transmit the programming information to the mobile units.

Shah discloses transmitting programming information to mobile devices from a base

station using control and/or traffic channels (col. 3, lines 35-53 and col. 4, lines 45-57).

At the time of invention, it would have been obvious to a person of ordinary skill in the

art to modify the inherent channels used in Doiron for wireless communication between the base

and mobile stations with the specific teachings of traffic/control channels described in Shah since

it is well known in the art that such channels can be used in over the air programming.

Regarding claim 2, the combination of Doiron and Shah discloses the method of claim 1,

wherein the step of verifying further comprises the steps polling each participating wireless

subscriber terminal, using one or more control channels, to determine whether any participating

wireless subscriber terminals have not received any program segments (Doiron, page 16, line 30-

page 17, line 9; Shah, col. 3, lines 35-53 and col. 4. Lines 45-57); and retransmitting from the

base station the program segments that any participating wireless subscriber terminals have not

received (Doiron, page 20, lines 1-12). ·

Regarding claim 3, the combination of Doiron and Shah discloses the method of claim 2,

wherein the unreceived program segments are retransmitted over one or more point-to-point

control channels (Doiron, page 20, lines 1-12; Shah, col. 3, lines 35-53).

Regarding claim 4, the combination of Doiron and Shah discloses the method of claim 2,

wherein the unreceived program segments are retransmitted over one or more broadcast control

channels (Doiron, page 20, lines 1-12; Shah, col. 3, lines 35-53).

Regarding claim 5, the combination of Doiron and Shah discloses the method of claim 2,

wherein the unreceived program segments are retransmitted over one or more traffic channels

(Doiron, page 20, lines 1-12; Shah, col. 3, lines 35-53).

Regarding claim 6, the combination of Doiron and Shah the method of claim 1, wherein

the step of verifying further comprises the step of performing a series of diagnostic tests at each

participating wireless subscriber terminal to determine the validity of the new control program

received at that wireless subscriber terminal (Doiron, page 21, line 5-page 22, line 16).

Regarding claim 7, the combination of Doiron and Shah discloses the method of claim 1,

further comprising the step of storing each program segment received by the wireless subscriber

terminal in the non-volatile memory of the wireless subscriber terminal, whereby the wireless

subscriber terminal retains all received program segments if reception of program segments by

the wireless subscriber terminal is interrupted as evidenced by the fact the if the programming

information is sent in segments (packets) (Doiron, page 20, lines 1-20).

Regarding claim 8, the combination of Doiron and Shah discloses the method of claim 1

further comprising the step of storing the original control program in non-volatile memory after

transferring control of the processor to the new control program (page 8, line 22-page 9, line 15).

Regarding claim 9, the combination of Doiron and Shah discloses the method of claim 1

wherein the control program and the new control program each comprise a software patch for

controlling less than all of the operations of the wireless subscriber terminal (Doiron, page 8,

lines 22-27).

Regarding claim 10, the combination of Doiron and Shah discloses the method of claim 1

wherein the wireless subscriber terminal is a cellular phone (Doiron, page 8, lines 15-27; Shah,

col. 6, lines 6-8; figure 3).

Regarding claim 12, the combination of Doiron and Shah discloses the method of

claim 1, wherein the step of transferring control to the new control program is forced by the

base station during the step of initializing each wireless subscriber terminal (Doiron, page 11,

lines 3-10, page 24, lines 6-27).

Regarding claim 20, Doiron discloses a method for operating a base station to program

one or more wireless subscriber terminals in a wireless system, the method comprising the steps

of: initializing a plurality of wireless subscriber terminals, using a channel, to receive a control

program (page 11, lines 3-10); broadcasting the control program to the plurality of wireless

subscriber terminals (page 11, lines 3-12); verifying that each one of the plurality of wireless

subscriber terminals has received the control program (page 14, lines 11-20); and transferring

control of each one of the plurality of wireless subscriber to terminals to the control program

(page 15, lines 7-10).

Doiron, however, fails to specifically disclose wherein the base station is using control or

traffic channels in order to transmit the programming information to the mobile units.

Shah discloses transmitting programming information to mobile devices from a base

station using control and/or traffic channels (col. 3, lines 35-53 and col. 4, lines 45-57).

At the time of invention, it would have been obvious to a person of ordinary skill in the

art to modify the inherent channels used in Doiron for wireless communication between the base

and mobile stations with the specific teachings of traffic/control channels described in Shah since

it is well known in the art that such channels can be used in over the air programming.

Regarding claim 21, the combination of Doiron and Shah discloses the method of

claim 20, the step of initializing further comprising the steps of transmitting a broadcast firmware

start message to each wireless subscriber terminal over one or more forward channels and

receiving a broadcast firmware start response messages from one or more participating wireless

subscriber terminals over one or more reverse channels (Doiron, pages 13-14; figures 4-9).

Regarding claim 22, the combination of Doiron and Shah discloses the method of

claim 20, the step of broadcasting further comprising the step of transmitting one or more

broadcast firmware block messages over a broadcast channel (Doiron, pages 13-14; Shah, col. 3,

lines 35-43).

Regarding claim 23, the combination of Doiron and Shah discloses the method of

claim 20, the step of verifying further comprising the steps of: transmitting a broadcast firmware

status request message to one or more participating wireless subscriber terminal over one or more

forward channels (Doiron, page 16, line 30-page 17, line 9); receiving a broadcast firmware

status message from one or more of the one or more participating wireless subscriber terminals

(Doiron, pages 13-14); retransmitting any missing program segments to the one or more

participating wireless subscriber terminals (Doiron, page 20, lines 1-12).

Regarding claim 29, Doiron discloses a method for operating a wireless subscriber

terminal in a wireless system to receive a control program, the method comprising the steps of:

initializing a terminal, using a channel, to receive a control program, the control program

comprising a plurality of control program segments (page 11, lines 3-10); receiving a broadcast

comprising the plurality of control program segments (page 9, lines 5-15); verifying that the

terminal has received all of the control program segments (page 14, lines 11-20); and transferring

control of the terminal to the control program (page 15, lines 7-10).

Doiron, however, fails to specifically disclose wherein the base station is using control or

traffic channels in order to transmit the programming information to the mobile units.

Shah discloses transmitting programming information to mobile devices from a base

station using control and/or traffic channels (col. 3, lines 35-53 and col. 4, lines 45-57).

At the time of invention, it would have been obvious to a person of ordinary skill in the

art to modify the inherent channels used in Doiron for wireless communication between the base

and mobile stations with the specific teachings of traffic/control channels described in Shah since

it is well known in the art that such channels can be used in over the air programming.

Regarding claim 30, the combination of Doiron and Shah discloses the method of claim 29, the step of initializing further comprising the steps of receiving a broadcast firmware start message over a forward channels and transmitting a broadcast firmware start response message over a reverse channel (Doiron, page 11, lines 3-11 and page 19, lines 3-9).

Regarding claim 31, the combination of Doiron and Shah discloses the method of claim 29, the step of receiving a broadcasting further comprising the step of receiving a plurality of firmware block messages over a broadcast channel (Doiron, page 9, lines 5-15).

Regarding claim 32, the combination of Doiron and Shah discloses the method of claim 29, the step of verifying further comprising the steps of receiving a broadcast firmware status request message over a forward channel; transmitting a broadcast firmware status message over a reverse channel, the broadcast firmware status message identifying any missing control program

segments; receiving any missing control program segments identified in the broadcast firmware status message (Doiron, pages 19-21).

Regarding claim 33, the combination of Doiron and Shah discloses the method of claim 29, the step of transferring control further comprising the step of receiving a firmware switch-over message (Doiron, figures 4-9).

5.   Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doiron and Shah as applied to claim 1 above, and further in view of Lahdemaki, U.S. Patent No. 6,167,257.

Doiron, Shah and Lahdemaki are analogous art because they are from the same field of endeavor,

that is radio communications, specifically pertaining to over the air programming of mobile

devices via a base station.

Regarding claim 11, the combination of Doiron and Shah discloses the method of claim 1

as described above. The combination, however, fails to specifically disclose wherein the wireless

subscriber terminal is a terminal of a wireless local loop.

Lahdemaki discloses a terminal of a wireless local loop which can be programmed via a

base station (col. 3, line 45-col. 4, line 42; figures 1-3).

At the time of invention, it would have been obvious to a person of ordinary skill in the

art to modify the terminals of Doiron and Shah with the terminals of Lahdemaki since it is well

known in the art that such WLL terminals can be programmed via over the air programming.

6.   Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doiron,

Shah and Zicker, U.S. Patent No. 5,794,141.

Doiron, Shah and Zicker are analogous art because they are from the same field of

endeavor, that is radio communications, specifically pertaining to over the air programming of

mobile devices via a base station.

Regarding claim 13, Doiron discloses system for programming wireless subscriber

terminals, the system comprising: a base station (figure 1, items 20 or 22); a control program

transmitted from the base station (abstract, page 8, lines 2-6); one or more wireless subscriber

terminals in wireless communication with the base station over an air interface (figure 1), the air

interface comprising inherently a plurality of channels; means for initializing the one or more

wireless subscriber terminals, using the channels, to receive the control program (page 11,

lines 3-10); means for broadcasting the control program to the one or more wireless subscriber

terminals (page 11, lines 3-12); means for verifying that each initialized wireless subscriber

terminal has received the control program (page 14, lines 11-20); and means for

transferring control of each initialized wireless subscriber terminal to the control program (page

15, lines 7-10).

Doiron, however, fails to specifically disclose wherein the base station is using control or

traffic channels in order to transmit the programming information to the mobile units.

Shah discloses transmitting programming information to mobile devices from a base

station using control and/or traffic channels (col. 3, lines 35-53 and col. 4, lines 45-57).

At the time of invention, it would have been obvious to a person of ordinary skill in the

art to modify the inherent channels used in Doiron for wireless communication between the base

and mobile stations with the specific teachings of traffic/control channels described in Shah since

it is well known in the art that such channels can be used in over the air programming.

Doiron also fails to specifically the base station capable of storing programming

information, but rather shows the base station first receiving programming information from a

communication manager and then transmitting that programming information to remote

terminals (page 8, lines 2-6).

Zicker discloses a base station that stores programming information, and then transmits

that programming information to a mobile device (col. 7, line 38-col. 8, line 43 and col. 12,

lines 47-54).

At the time of invention, it would have been obvious to a person of ordinary skill in the

art to modify Doiron with the teachings of Zicker, since it is well known in the art that base

stations are capable of storing information, specifically programming information.

Regarding claim 14, the combination of Doiron, Shah and Zicker discloses the system of

claim 13, wherein the one or more wireless subscriber terminals comprise cellular phone

handsets (Doiron, page 8, lines 15-27; figure 1; Shah, col. 6, lines 6-8; figure 3; Zicker, figure 1).

7.   Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doiron, Shah and

Zicker as applied to claim 13 above, and further in view of Lahdemaki.

Regarding claim 15, the combination of Doiron, Shah and Zicker discloses the method of

claim 13 as described above. The combination, however, fails to specifically disclose wherein

the wireless subscriber terminal is a terminal of a wireless local loop.

Lahdemaki discloses a terminal of a wireless local loop which can be programmed via a

base station (col. 3, line 45-col. 4, line 42; figures 1-3).

At the time of invention, it would have been obvious to a person of ordinary skill in the

art to modify the terminals of Doiron, Shah and Zicker with the terminals of Lahdemaki since it

is well known in the art that such WLL terminals can be programmed via over the air

programming.

8.   Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doiron and

Zicker.

Regarding claim 16, Doiron discloses a base station for programming one or more

wireless subscriber terminals in a wireless system, the base station comprising: inherently a

transmitter for transmitting forward messages to wireless subscriber terminals over an air

interface (figure 1), the forward messages including the one or more program segments (page 7,

line 27-page 8, line 6, page 9, lines 5-26); inherently a receiver for receiving reverse

messages from wireless subscriber terminals over the air interface (page 12, lines 10-13, page 14,

lines 11-29); and a inherently processor connected to the transmitter, and the receiver for

controlling operation of the base station (figure 1).

Doiron fails to specifically the base station capable of storing programming information,

but rather shows the base station first receiving programming information from a communication

manager and then transmitting that programming information to remote terminals (page 8,

lines 2-6).

Zicker discloses a base station that stores programming information, and then transmits

that programming information to a mobile device (col. 7, line 38-col. 8, line 43 and col. 12,

lines 47-54).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Doiron with the teachings of Zicker, since it is well known in the art that base stations are capable of storing information, specifically programming information.

Regarding claim 17, the combination of Doiron and Zicker discloses the base station of claim 16, the forward messages including broadcast firmware start messages and the reverse messages including broadcast firmware start response messages (Doiron, figures 4-9 and accompanying text).

Regarding claim 18, the combination of Doiron and Zicker discloses the base station of claim 16, the forward messages including broadcast firmware status request messages and the reverse messages including broadcast firmware status messages (Doiron, figures 4-9 and accompanying text).

Regarding claim 19, the combination of Doiron and Zicker discloses the base station of claim 16, the forward messages including firmware switch over messages (Doiron, figures 4-9 and accompanying text).

Claim Rejections - 35 USC § 102

9.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

10.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11.   Claims 24-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Doiron.

Regarding claim 24, Doiron discloses a wireless subscriber terminal for use in a wireless system, the terminal comprising: inherently a memory as evidenced by the fact that the mobile stores programming information (page 9, lines 5-15); a transmitter for transmitting reverse messages from the terminal over an air interface (page 16, line 30-page 17, line 9; figure 1), a receiver for receiving forward messages from a base station, the forward messages including the one or more program segments (page 11, line 11-21, page 9, lines 5-15; figure 1); and inherently a processor connected to the memory, the transmitter, and the receiver for controlling the terminal, and for storing the one or more program segments in the memory as evidenced by the fact mobile is able to perform these functions.

Regarding claim 25, Doiron discloses the terminal of claim 24 wherein the forward messages include broadcast firmware start messages and the reverse messages include broadcast firmware start response messages (figures 4-9).

Regarding claim 26, Doiron discloses the terminal of claim 24 wherein the forward messages include broadcast firmware status request messages and the reverse messages include broadcast firmware status messages (figures 4-9).

Regarding claim 27, Doiron discloses the terminal of claim 24 wherein the forward

messages include firmware switch over messages (figures 4-9).

Regarding claim 28, Doiron discloses the terminal of claim 24 wherein the forward

messages including the one or more program segments are broadcast messages (figures 4-9).

Conclusion

12.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Daly, U.S. Patent No. 6,456,843, discloses over the air programming.

Broderick, U.S. Patent No. 5,995,829, discloses over the air programming.

Mizivosky, U.S. Patent No. 5,943,425, discloses over the air programming.

13.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Temica M. Davis whose telephone number is (703) 306-5837. The

examiner can normally be reached on Monday-Thursday from 8:30 am to 6:00 pm. The

examiner can also be reached on alternate Fridays.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Edward

Urban, can be reached on (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to TC2600 Customer Service whose telephone number is (703)306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for any communications intended for entry).
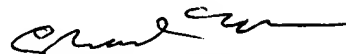
Hand-delivered responses should be brought to Crystal Park II, 2121

Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Temica M. Davis

September 28, 2002

EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600